

April 2017

Issue 16

# THE SPECTRUM SHOW

Magazine

## BATTLEZONE

CLONES GO HEAD TO HEAD

## WHEN GAMES LIE

GAME INLAYS, TRUTH OR LIES?

FLASHBACK 86

GAME REVIEWS

HARDWARE

SPECIAL FEATURES



Includes material  
not in the video  
show!

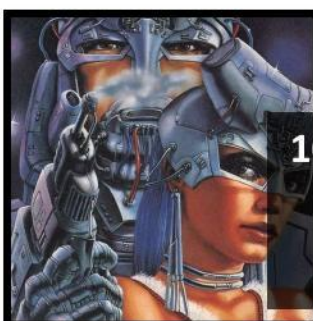
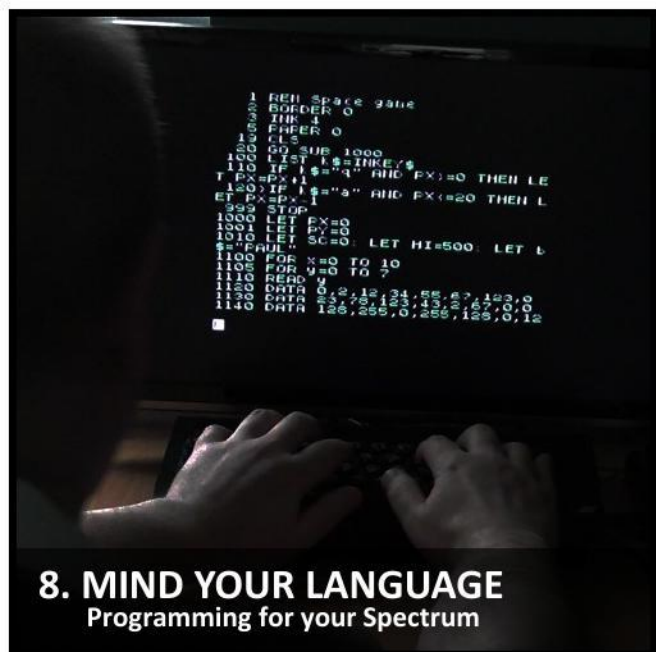
### THE GRUMPY OGRE

More grumpy adventuring  
from the ogre himself.





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Welcome to issue 16 and thank you for taking the time to download and read it.

It is with a very heavy heart that I write this editorial, yet again Retro Computers have failed to deliver the Vega+, leaving honest backers wondering what is going on.

Anyone following this long running farce will know that RCL and their ex-directors are embroiled in legal battles and a war of words. Each blaming the other for delays, over payments, under-payments, intellectual property rights, firmware problems and many other things. The end result of this mess, is that the actual device still has not been delivered.

Small camps of people have now formed, each supporting one side or the other and each trolling the other in various forums, Facebook pages and the comments section of the Indiegogo campaign.

Losing money on a crowd funded project didn't bother me (I backed this campaign) to be honest, it is a risk after all, but what really got under my skin was the lies and counter lies, fraud and deception that is splitting the Spectrum community. I can see both sides of the arguments, and questions to each party that people want answered, I know will not get answered, or at least answered in a full and honest way.

I suspect this could run for a long time, or at least until the unit is delivered, RCL go into liquidation or the fraud squad get involved.

## Let's Get Positive

Let's get positive for a moment, although until the Vega+ mess is sorted, my heart isn't really into it.

This issue has some great new features supplied by fellow enthusiasts. For the technical amongst you, the Mind Your Language feature will run for several issues and cover the many programming languages available for the machine. I found this very interesting and am looking forward to the next instalments.

The next series of The Spectrum Show has been pencilled in, and I know what will be coming in the next ten episodes. Some great hardware, features and reviews, and Geoff is back with a new section.

I am always open to suggestions for the show, so if there is something you would like to see covered, let me know.



My new game Code Zero was released not so long ago and I am now working on a 'Making of' feature to take you through the process and provide a little history on the game.



It was certainly a challenge, with only 1.7k of memory left in Arcade Games Designer. If anything had gone wrong I doubt there would be enough room to fix it!

At the moment there are so many strands in progress, I could get a job as a juggler! I have two game projects bubbling away, both very different, and both very challenging.

There is the new series of the show to work through, with some great features to produce and some nice hardware to play with. There is also this magazine to work on.

I really appreciate the offers of help from various people with this, and it's great to read other features and reviews.

## Fancy writing a game review or special feature?

I am always looking for new content and all contributions welcome.



## PLUS 2 DELAYS

Hoping for an October release, Amstrad have again failed to deliver on their promise of putting the new Spectrum in the hands of gamers. The initial date passed by 7 days ago with high street retailers left wondering why no stocks have arrived.

Amstrad say some machines have been delivered to some outlets, but refuse to say which outlets and when the machines actually arrived.

Early review machines have been provided to magazines, and there are numerous reviews and opinions. The built-in cassette deck got the thumbs up, as did the keyboard, but some didn't like the missing 48K legends on the keys.

The non-standard joystick ports divided opinion, and the expansion port changes mean some peripherals may not work.



## MASTERS OF CODE

A new budget label was announced in September, boldly claiming that by the end of the year, they would have captured 10% of the games market.

Heading up the new company is the ex MD of AI Products, the company responsible for the majority of Mastertronic games, and doing the coding will be his two sons.

Who are this exciting new company? Codemasters of course, run by Jim, David and Richard Darling.

They plan to sell all of their games at £1.99, aiming to take on Mastertronic in this arena.

## FINE AND DANDY

An argument about software licence rights, centred around the arcade game Gauntlet have been resolved, allowing both competing titles to be released. The issue was around similarities to the arcade game in two titles – Gauntlet and a game originally called Dauntless.

Dauntless was to be released by Electric Dreams until US Gold stepped in, claiming the game was a copy of their licence. However as it turns out, Dauntless is a version of an older Atari 8 bit game called Dandy, that in turn, Gauntlet was based on.

To avoid any problem, Electric Dreams are now to release their game with the changed title of Dandy.

## MASTERTRONIC NOT HAPPY

Mastertronic are angry. Their chart success seems to have taken a dive, but they lay the blame directly on Gallop, the people who compile the charts.

The problem is that Gallop have recently added WH Smith's to the list of retailers who provide them with sales figures, and WH Smith do not stock Mastertronic games. This means that sales figures are now lower than before for the budget label.

They do however, stock Firebird budget titles, which has had a dramatic effect on the charts, seeming to indicate that firebird are selling many more games than Mastertronic.

Gallop were expecting a small change in the numbers, but not this much, they say.

Mastertronic also claim they are under-counted because their other main outlets, Woolworth, Tesco and Toys R Us are also ignored by Gallop.

Talks are underway to try and sort this mess out, with the hope to address the balance. Boots can also provide sales





## CLASSIC ADVERTS

Looking back at the classic, and not so classic adverts from the Spectrum's past.

**BACKPACKERS**  
**GUIDE TO THE UNIVERSE PART 1**

Not just a game...  
...more a way of life

48K Spectrum  
**£7.50**

Software by **fantasy**

# TOTAL RECALL™

Ocean Software 1991



Total Recall is obviously a game based on the film of the same name starring Arnold Schwarzenegger.

Originally planned for release in December 1990, the game was not thought to be good enough, and there are early demo versions to be found of this rejected game.

Ocean did not like it and changed the development team, and according to James Higgins in the excellent Ocean History book, a complete re-write was knocked together in about three and a half weeks. This new version was much improved in every way

You play Quaid, a man who's life is a mystery. A man who had a mind implant to hide his identity, and now he wants to find out about himself.

The first level sees you trying to get from your hotel to a phone box on the other side of the city, avoiding people who want to kill you.

There are various buttons that when operated, create bridges or open up pathways and these are the key to the game. You will have to work out which switch does what to get very far. There are also lifts that take Quaid to other levels, weapons to collect and enemies to punch or shoot.

On his way he must also collect five objects. These are things like a briefcase, passport and tickets to Mars. These are required to move on in the game and progress through the levels.

The first level is large, and with the addition of the



extra tasks, will take you a while to get through, that is if you can stay alive. I found it quite tricky to get very far, but did enjoy playing the game.

The graphics as mentioned before are excellent, well drawn and well animated. The use of colour is very clever too, and the backgrounds have some wonderful detail.

Sound is used very well and there is some great music on the title screen and some nice affects used for various things like switches, lifts and of course firing.

I never managed to get to the next level, but watching the RZX playback, it consist of a driving section where you have to locate a





warehouse while avoiding the other vehicles. This part is very reminiscent of a horizontal Spy Hunter. At the end of this there is a boss battle with a large armoured vehicle before you can move on.

Once past this, it's back to the platform game where you have to escape and get to the space port ready for the trip to Mars. Once on Mars you then have to locate the rebel hideout, and this sees us back to the driving section.

Once past this and it's onto the last level, and the search for the rebel leader. This final section takes us back to the platform and switches variant.

This game is large and will not be completed quickly, so you do get value for money.

A great game then, with large graphics and good gameplay.

Give this one a go.



# GAME REVIEWS



Faster Than Light 1986

A distress call has been received from the outpost Regulus, asking for help to defend themselves against an attack from an unknown origin. As the only Lightforce fighter close by, you are dispatched to assist. Yes it's a shoot-em-up, and a good one at that.

When this game was released it was considered a technical marvel due to the colourful graphics, smooth scrolling and apparent lack of colour clash, all down to some clever coding.

Starting in deep space, you get asteroids, alien ships and huge alien cruisers to deal with. These have pods that can be destroyed, but you have to watch out for the yellow asteroids, these cannot be destroyed. This nasty trick is repeated across all levels, but you soon get to recognise what to avoid.

If you are good enough you then get to descend to the planet. Here the graphics change to a jungle world, scrolling smoothly as you battle your way through hordes of attacking fighters and trying to destroy ground based targets.

The next level throws you into combat with orbiting platforms, again with ground based targets and swarming aliens.

Onward and next we get an ice planet to fly over followed by an asteroid belt, which is where the game takes you back to the first level and things just repeat again.

This game is hard, very hard, and I had to use the RZX playback to see these later levels. The graphics are well drawn and with clever use of colour, they look really nice. The scrolling is smooth and the landscapes are detailed, all very non-Spectrum.



Sound consists of just firing and explosions, but with almost constant action, there are hardly any places in the game where there isn't sound playing.

Control is via keyboard or joystick and is nice and crisp, and overall it's an exciting game to play with a great feeling of achievement when you complete a level.

For shoot-em-fans then, this is a highly recommended game, but be warned – it's hard.. only good players welcome...



# Split Personalities

Split Personalities, originally released as Slitting Images until they got into trouble by Spitting Image lawyers. The game is a block pushing affair that many of us older generation can remember playing long before computers or mobile phones.

The idea is simple, slide the blocks around to complete an image. The image you are trying to build is displayed top right, and the blocks arrive one by one from the top left square when you select it.

Also arriving on screen will be bombs and bonuses. To get rid of bombs, or blocks you don't want, you can push them out of sliding doors that randomly open on each wall. If you fail to get rid of a bomb, it will take one of your lives.

Sometimes cracks appear in the walls, and hitting these with any block will mean you can't slide any blocks on to that area. There is also a time limit to keep you on the move.

There are several bonus items that involved colliding two blocks that match, for example on the Margaret Thatcher level, you can get a bonus by pushing the drinks block into the Dennis block.

The images to build are caricatures of famous people (at least famous in the 80s) like Ronald Regan and Margret Thatcher.

To move a block you first position the spinning control square over the block you want to move. This can be tricky to control, so practice makes perfect. You then press the fire key, and then press the direction you want to send the block. The block will then move until it hits something.

Overall, it's an addictive game that makes a change from shooters or platform games. Give it try.

Domark 1986





# WHEN INLAYS LIE



MAKING PROMISES THE  
GAMES CAN'T KEEP



Looking at the cassette inlay is often the first contact a potential buyer has with a game. When you see colourful, well drawn and interesting inlays you'll probably buy a game, and many software publishers tried to make their inlays look good. Sometimes though they also included hoaxes. I don't know how many of them were intentional but often they were promising something that wasn't present in games. It doesn't mean that those games were bad, but players could feel that they expected something more.

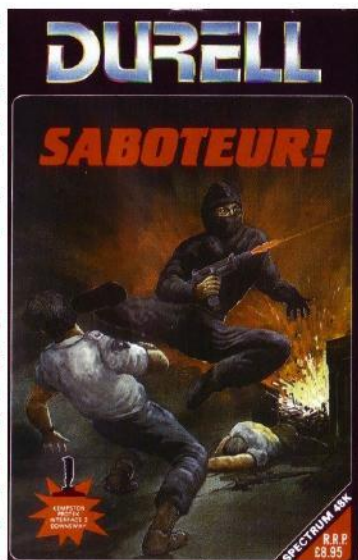
It wasn't even lesser known titles that suffered from this phenomenon, let's start with a classic title Ant Attack. It's a game about big ants the size of a pony. There is also a big ant on the inlay but it's bigger than a pony. Actually it looks like Godzilla, towering over the city walls and dwarfing the player. The game though portrays them very differently.

Lunar Jetman, Ultimate's sequel to Jetpac, has an inlay with the now famous Moon Rover and trailer. That trailer was a mystery for a long time, many people thought that it existed in the game. Today though we know that there is no trailer in Lunar Jetman. So why was it there?

Saboteur's inlay shows a main character with an Uzi gun. There are many objects you can use as a weapons in this game but none of them are guns. Was this a feature taken out, or was it marketing?

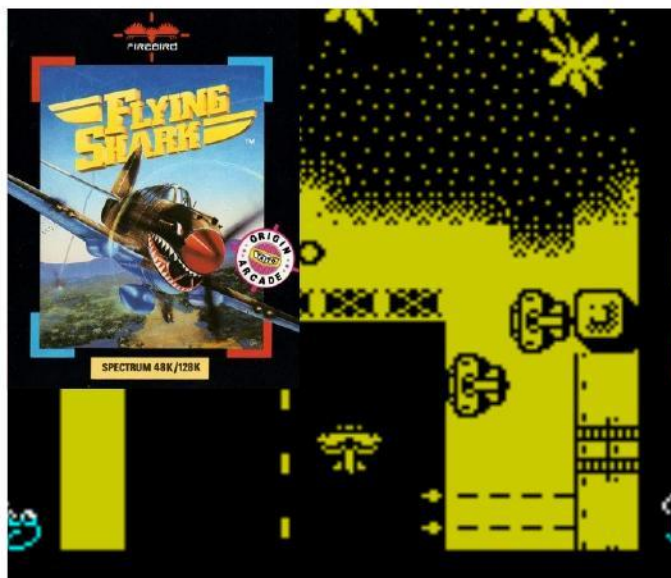
On the inlay of G.I.Hero you can see a man who looks like a Rambo wannabe. You won't find him in the game though because the main character looks completely different - he is a soldier wearing an uniform and a helmet. Another case of removed feature or character change perhaps, or just the artists not given enough information?

Sqij, one of the worst Spectrum games ever, has a scary creature - probably the Sqij itself - on an inlay. The real Sqij doesn't look scary at all - it looks funny, misshapen and a little bit odd!



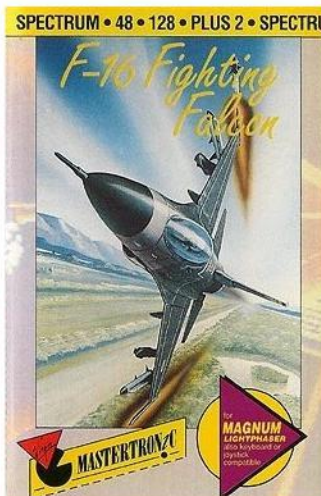
## Plane Lying

Flying Shark is an excellent shoot'em-up where you control a biplane. You can tell that by the sprite that shows two sets of wings but you won't find any biplanes on the inlay, instead you can see a monoplane similar to a Hawker Hurricane.



The Inlay of Dr. Destructo is quite strange and shows a biplane (Hawker Fury?) fighting with Russian jets (probably Su 7). Who will win? You'll never know because all aircraft in the game are propeller monoplanes. The depiction of planes seems to be a ruining theme here.

F-16 Fighting Falcon from Codemasters is probably the biggest hoax. When you see the box of this title, featuring a picture of F-16, you would expect that it's a game where you control that American jet. Unfortunately there are no F-16s in this game! The plane you control is MiG-29, why? Well this one is easy to explain, the game is just a copy of another Codemasters game MiG-29 Soviet Fighter, but with a different name and control panel. Definitely a bit of lying going on there rather than a mistake.





## When Inlays Lie

### Sex Sells

Pictures of a sexy women always helps to increase sales and computer games are no exception. There is a naked woman on the inlay of Mined Out, that classic old-school game from Quicksilver, but you won't find her in a game (you can see damsels there but they are dressed).

Game Over has a beautiful inlay with half-naked woman (painted by famous Spanish artist Luis Royo). Wanna see her in a game? Forget it, she isn't there.

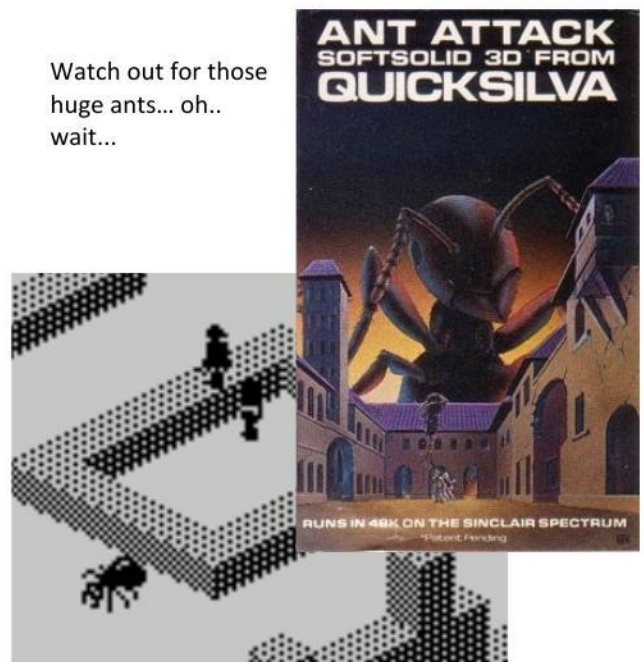
The sequel to Game Over has two versions: A Spanish one is called Phantis and an English one called Game Over 2. They have 2 different inlays but both feature sexy women. Unfortunately you won't meet them in a game.

Men sometimes also appear on inlays but aren't present in games. Three examples: Bedlam, Buck Rogers - Planet of Zoom and Spy Hunter.



It's in the game....  
or rather it isn't!

Watch out for those  
huge ants... oh..  
wait...





## Sporty Covers

Time for a bit of sport. Chequered Flag is a Formula 1 car simulator and its inlay shows several cars competing on a circuit. The game though doesn't feature other cars and your only opponent is time. Memory restrictions, Spectrum limitations or misdirection?

On the inlay of Basket Master you can see two teams playing basketball. There are also two teams in a game but they are one-man teams. Maybe a sprite limitation, or the others have nipped off for a break?

## Getting Real

And now something I personally don't like - realistic pictures on the inlay but cartoony graphics in the game. I'm sure there are many examples but I'll list only few of them.

Athena (also known as Pshyco Soldier). Muscle bound woman fighting huge monster... but not so scary in the game.

Cobra. Sylvester Stallone, touting a gun and ready to kill, but in the game we get a not so nasty looking character.

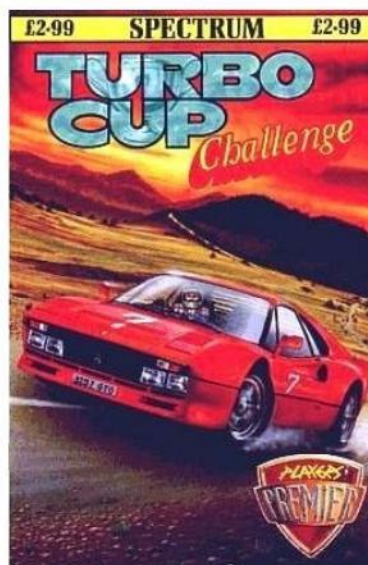
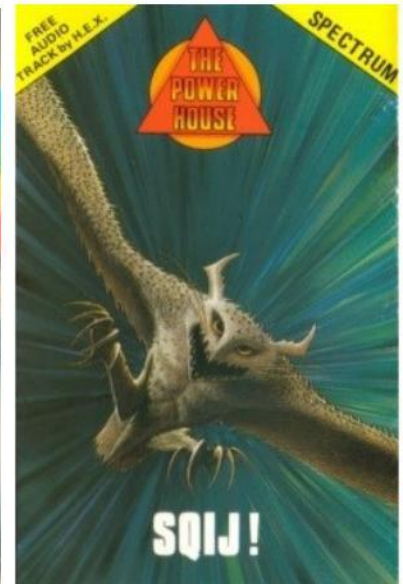
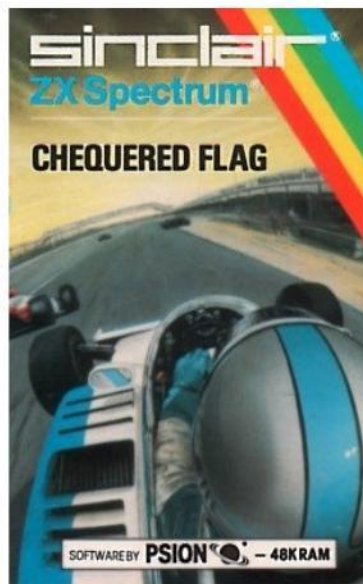
Firelord, Spellbound, Knight Tyme, Stormbringer are all equally at blame here too.

## Finally

I'll finish my article with interesting examples of re-releases. Inlay of re-released game and original inlay are usually almost identical (the same picture but other publisher's logo etc.). But sometimes publisher of the re-release create completely new inlays and it can look weird.

Turbo Cup is a racing game where all cars are Porsche 944s, but the re-release publisher decided to put a red Ferrari on the inlay. New inlays of Hysteria and Splat feature characters you won't meet in those games and the inlay of Star Paws shows a dog in a spaceship. There is a dog in Star Paws but it doesn't pilot any spaceships.

Feature by Piotr "PocoPop" Szymanski





## WUNDERCHARS

Dave Hughes 2011

This is a strange game, that soon becomes highly addictive and infuriatingly hard, but that doesn't stop you going back to try again – the sign of a well thought out game.

The idea is simple, you have to collect falling UDGs (User Definable Graphics, for those that do not know). Yes it is that simple, but there are a few rules to follow. You can only carry three at a time, you then have to upload them by going to the upload pad at the bottom right of the screen. Once uploaded you have to recharge by going to the recharge pad bottom left, then you can start again. To complete each level you have to collect 96 UDGs. As you collect them, they appear at the top right.

Each level has a theme and takes the form of old game images, the type you usually find in type-in games or very early Spectrum releases.

There are things that get in your way of course, with the first level having a centipede like thing that you can't destroy. Later levels shove more tricky things to avoid such as jellyfish, men in flying saucers and skulls.

Graphics wise, apart from the UDGs there are some nice sprites and everything moves smoothly. Sound consists of various beeps and control is responsive.

It isn't long before things get very hectic and the difficulty is slowly turned up. The simple games often prove the most addictive, and as soon you lose your last life, you want to dive straight back in again.

A great game then, very addictive and well worth tracking down.

Highly rated.





# TRANS MUTER

Codemasters 1987

The planet is dying and humans have burrowed deep into the core to survive, leaving mechanical security devices to fend off any potential invaders. As time goes on the planet can no longer sustain life and the humans leave. However, after leaving, they left behind all of the deadly defence systems, which must be destroyed to protect any space travellers that happen to find the planet and go exploring. So starts this horizontal shoot-em-up.

You control the Transmute ship on a mission to destroy everything. Typically there are ground based targets, flying aliens, missiles and of course the cave roof and ground to watch out for.

Level one and we get a smooth scrolling two colour landscape with various aliens popping up and ground based tanks and guns firing at you.

When enough are shot you can upgrade your ship. Icons at the bottom of the screen indicate what can be selected and these range from faster movement, double shot, laser and shield. I found the laser to be most effective as a first choice, if you can stay alive that long.

The ship wobbles it's head for some reason and it would have been much better to just leave it static.

Complete this level and we get an end boss to have a go at. Following this is a bonus level in open space with aliens to shoot for extra points. Then on to a part that reminds me of Penetrator, with nothing to shoot. This is just a test of flying skills as you manoeuvre through the tunnels.

The next level introduces shootable scenery and this is where the game gets tricky. There are hidden gun turrets in the scenery which are hard to see and you can end up losing lives here.

Again we get an end boss and then the game loops adding more things to avoid.

Apart from explosions and the laser there is very little



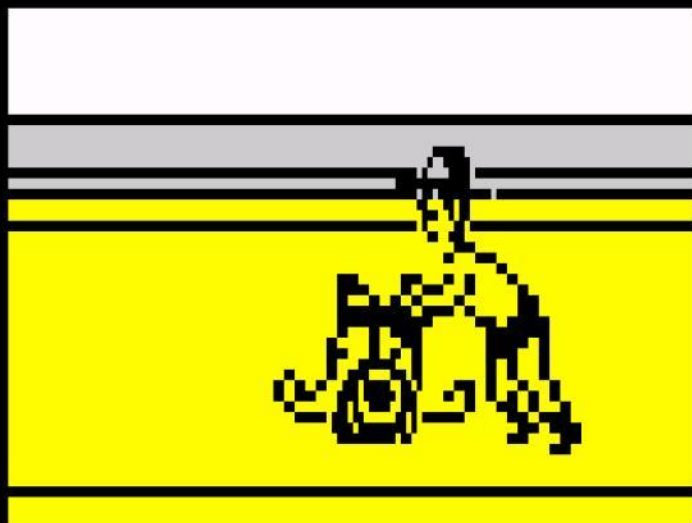
sound, which is a bit disappointing. The graphics are well drawn and some of the aliens animate well, in particular the tank like things that drive about on the surface and roof.

The game is fair but challenging with enough variation in game-play to keep most players happy.



## ROCK'N WRESTLE

Melbourne House 1986



After the success of Exploding Fist, Melbourne House continued on the fighting theme and announced to the world in October 1985 that the follow up would be a wrestling game. Not only that but Big Daddy, a famous UK wrestler at the time, would be involved and the game would be called Big Daddy's Rock N Wrestle. A few weeks later and the first advert appeared, but there was no mention of Big Daddy. Then it was announced that there was a delay of some kind and the game wouldn't be ready until after Christmas. Things went quiet for a while, and then the game slipped out quietly sometime in early 1986.

The advert claimed a 3 dimensional simulation, ten opponents, 25 different moves and a complete rock sound track.

You play Gorgeous Greg. A contender for the world title. The game starts, but it doesn't actually tell you this, the other wrestler heads towards you and within a few seconds you'll be on your back. To win a bout you have to pin your opponent to the floor for a count of 3 and to do this you have to first soften them up using kicks and punches. Trying to get these to work and avoid his attacks is very tricky.

Eventually you can grab him and try to throw him, or perform one of the other moves, that I completely failed to do. If you do manage to beat him then it's onto the next fighter of the ten until you beat them all.

The controls are confusing and cumbersome to execute but the computer player obviously knows them all and easily beats the hell out of you. I think the round ended but I was not sure. The two wrestlers continued to move and when I pressed fire, the game seemed to reset. There was no text saying who had won (although it was obvious). It would have been nice to at least have something to indicate you had lost.

The graphics are blocky and when the players come together it's hard to see who is who and who is doing what until one of them hits the canvas – usually you! Animation can be good, especially all the different moves, the audience though is silent and not animated.

Sound is ripped straight from Exploding Fist and is very sparse, so all in all this game is a huge let down. The lack of start and stop messages, the blocky graphics, the poor sound, the terrible game play. Oh.. and where is that rock sound track the advert promised?

One to stay away from then...



# Albattrossity

Jonathan Cauldwell 2008

Albattrossity is a simple yet addictive take on crazy golf. It shares some similarities to the favourite seaside pastime, but introduces other clever elements to make it different enough from other games involving clown heads and windmills.

In fact you don't get any of that here as the game is played side-on, and although the aim is the same, get your ball into the hole, the mechanics of how to do this are different.

Like Lemmings, you can choose what type of effect your character has, in the case of this game, your ball. You can have rubber balls, which obviously bounce around, steel balls that are used to smash through walls and sticky balls that cling to surfaces. And of course gravity always effects your balls (ooeerrr!).

To control direction and strength, you rotate a line from the centre of the ball to the direction you want to hit it and then set the power meter at the bottom right of the screen, and watch your ball go flying off.

Each screen gives you a set number of each ball type and these are increased each time you complete the level. Even so, you have to be careful to use the right ones for the job. The demo version gives you a lot of them, but the full games (sold via Cronosoft) adds the limits.

The graphics are classic old-school blocks, but movement is smooth and the game is more strategy than action, so there is no real reason to have fancy graphics. Sound is excellent, with nice music playing throughout.

It's easy to play, and keeps you going back to have another go, trying to complete all 38 holes.

A great little game then, with plenty of challenge.





## BATTLEZONE SHOOTOUT

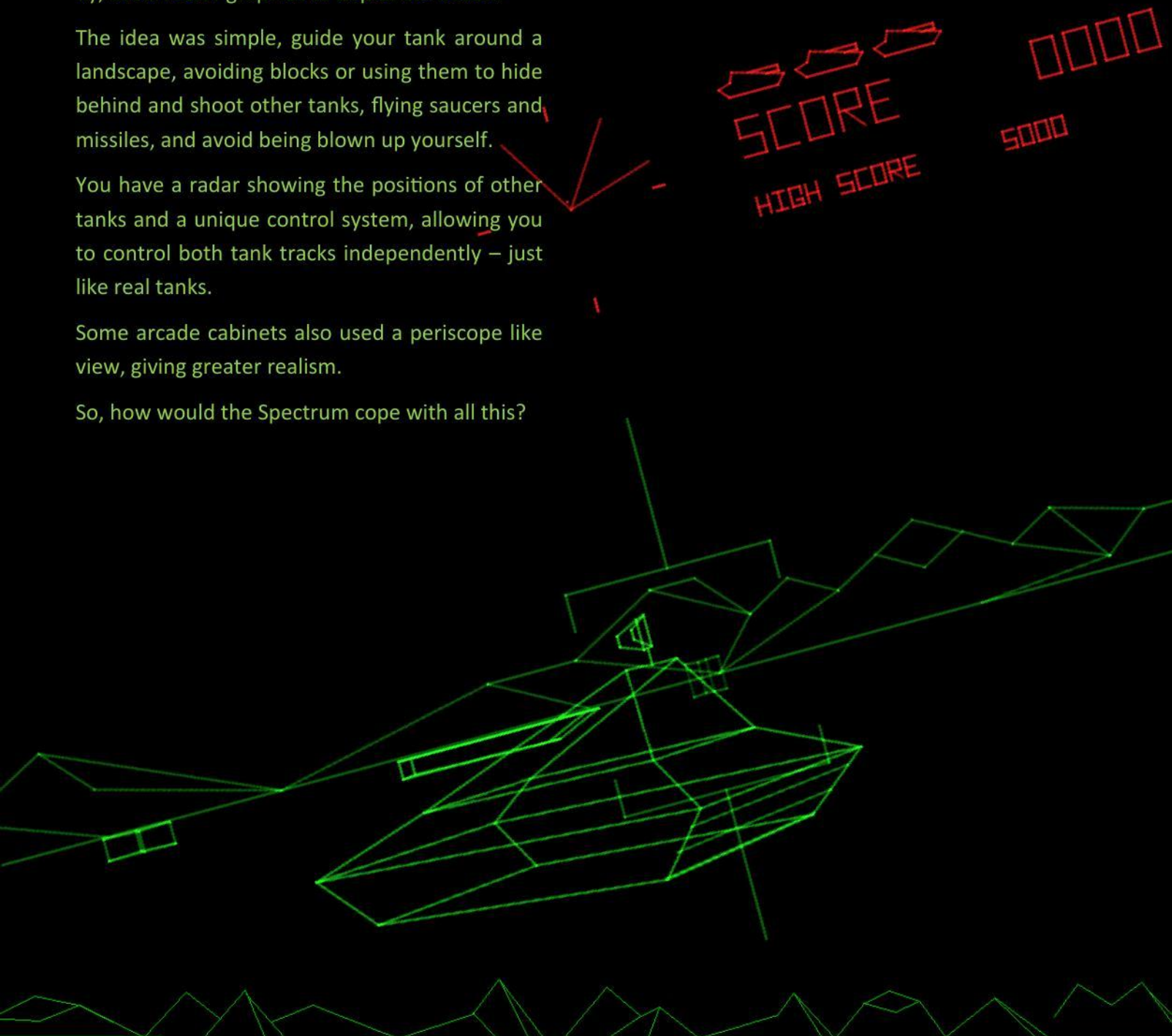
BattleZone was released into the arcades in 1980 by Atari, and like previous games by the company, used vector graphics to depict the action.

The idea was simple, guide your tank around a landscape, avoiding blocks or using them to hide behind and shoot other tanks, flying saucers and missiles, and avoid being blown up yourself.

You have a radar showing the positions of other tanks and a unique control system, allowing you to control both tank tracks independently – just like real tanks.

Some arcade cabinets also used a periscope like view, giving greater realism.

So, how would the Spectrum cope with all this?





## BATTLEZONE

Quicksilver 1984

We start with the officially licensed version produced by Quicksilver in 1984 and as you would expect, this version is pretty close to the arcade.

Each tank track is controlled individually, if you are using the keyboard, and all of the features are there apart from the animated volcano!

There are less blocks scattered about in the landscape, so when moving forward or backwards, you don't really get the feeling of movement. There is the continuous drone of the engine, and various effects that try to mimic the arcade.

The wireframe graphics are nice and smooth, considering it's a 3.5mhz processors doing all the work. The colour scheme is not quite right, using magenta for the top panel rather than the red of the arcade, but that's not really a bad point.

Overall this is quite close to the arcade version and is very playable. The flying saucer and missile are included and there isn't any real issues. The other games will struggle to match this.



## COMBAT ZONE 3D

Artic Computing 1983

The display differs from the arcade game on several points, but the main omission is the landscape. Instead of the mountains and a volcano, there is just a line of dots. This means the sideways movement is less noticeable, but there are more blocks on the landscape which does help to convey movement.

The other difference is the colours. Instead of the plain green, Combat Zone draws tanks in cyan and the sites are in magenta.

The control panel includes a radar so you can locate the enemy but when you line them up for a shot, they quickly move. This makes the game very tricky and much more difficult than the arcade. After ten shots and a few minutes playing I still hadn't hit anything, compared to the arcade when my first shot took out a tank... as did my next 3 or 4.

This adds a bit of frustration to the game so I decided to dive straight in and use a different tactic which seemed to work. To



actually shoot anything you have to be almost touching them, so they can't move away. This changes the tactics and gameplay from the original, but once you get used to it, it's not too bad and I had a few enjoyable games.

Sound is ok.. and the controls are basic left, right, forward and backward – no option for independent track control.

Not a bad game... but a little too difficult to start with..



## BATTLEZONE SHOOTOUT

### 3D DESERT PATROL

CRL 1983

Now this game moves away from the vector display to a more filled look and the control panel is at the bottom of the screen.

Gameplay too is slightly different and you have to get to safety, watching as the distance meter slowly ticks down.

There are also minefields to avoid, and of course enemy tanks. You are also given just 50 shells should you need them.

Gameplay is a bit dull with lots of driving around in silence, avoiding tanks instead of shooting them and avoiding minefields by driving around them. After five minutes of playing I just didn't want to complete it, there was no excitement and relatively no challenge.



### HEAVY METAL

US Gold 1990

Now, here we have another game that could easily be missed out but to be honest I was struggling trying to find enough clones to put this together.

The radar is present plus you get a kind of zoom view, so you can locate tanks in the distance. The lower graphics panel shows the views from your tank, and you have to spin round looking for targets and then head off towards them.

The window gives a good feeling of movement, but things do slow down when there is a lot on screen, and this is reflected in the engine noise. Once you line up the enemy, they appear in the top zoom view and you then have to raise or lower your gun to give the right trajectory and fire away in the hope you get lucky.

If you are moving at the time it becomes more difficult



as you are always having to adjust your gun to the quickly approaching target. The other tanks fire back, and with enough damage your tank is destroyed.

This isn't a terrible game, just a bit awkward to get to grips with.



## ROMMELS REVENGE

Crystal Computing 1983

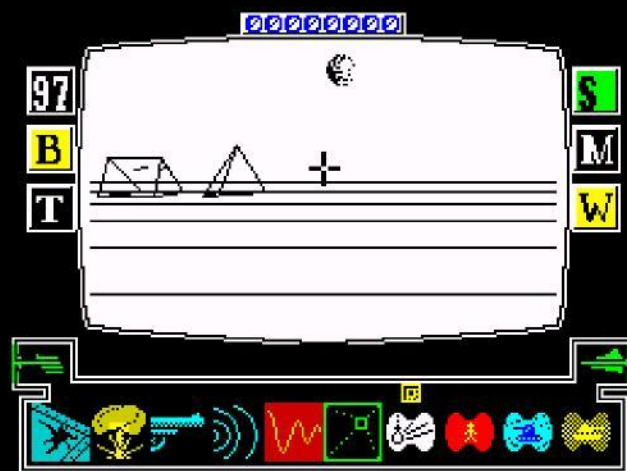
The first thing you notice is the colour scheme – it's blue!

The next thing is the landscape. To me it looks more like Lords of Midnight than Battlezone, but at least there is an animated volcano.

Onto the game and there is a nice variety of blocks and things you can't shoot, that give the feeling of movement including radar stations, triangles and what look like telegraph poles. The radar works well but movements isn't as smooth as some of the other games.

Sound is a bit of a let-down with only sound for firing and nothing else, this means you will be playing mostly in silence. Gameplay wise it's not too bad, and the best part is knowing when a tank has fired, by the short blip sound, and trying to get away from the shot. You can do this by moving away at an angle or hiding behind something. Then you have to outmanoeuvre the enemy to get your shot in.

It's all a bit dull without sound and not a game I would come back to.



## RED SCORPION

Quicksilver 1987

Now, this is a complex game with a complex story and lots of things to remember. There are options to request fire support, to identify objects, to arm missiles and a whole lot more. The screen has selectable icons and a variety of things providing information.

To be honest I think this is a much more involved strategy game than BattleZone, but the gameplay is very similar, just with a lot of other stuff layered over the top.

Before you shoot anything, it's best to identify it first, otherwise you can get into trouble and the game ends. So you drive around, pick something that's shooting at you and ask for identification. If it's a legitimate target, shoot back, if not move along

Before long however, your fuel will run out and you will have achieved absolutely nothing.

The graphics look nice and are smooth, and sound is ok, but I think there is too much stuff thrown in that makes it too complex to enjoy, at least from an arcade perspective.

If you have the time to learn all the commands and what they do, and to immerse yourself in the story it might be a totally different game, but we are not looking for that in this test.

## BATTLEZONE SHOOTOUT

### 3D TANK DUEL

Realtime Software, 1984.

Back into the clone games then, and here we have a decent version of the game. The graphics have been changed with a solid landscape and even an animated volcano. The other graphics are all wireframe and move smoothly enough.

There is not individual track control, just forward, backwards, left and right, which is a pity really.

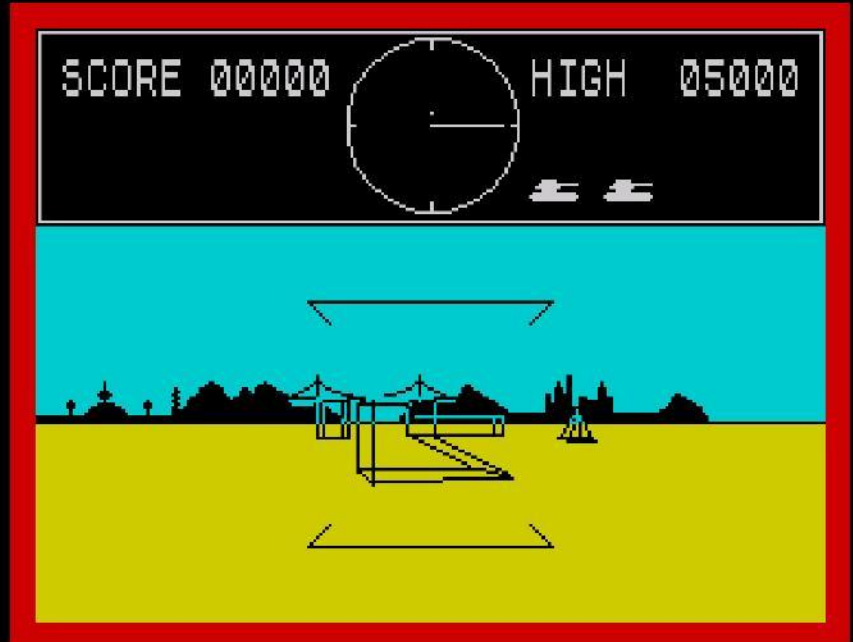
There are various different tanks and these are shown during the attract mode. There is also missiles and a flying saucer.

The top of the screen includes a radar that works well, despite not being smoothly animated and nearly every aspect of the arcade is here.

Sound-wise, there is a rather annoying continuous blip sound as you play, but there are some nice fire and explosion sounds.

The difficulty level is a bit high, and most of your time is spent trying to avoid enemy fire rather than lining up your own shots.

That said, it's a good version of the game and provides a good strong challenge.



## WINNER

There is no contest really, it has to be the official conversion.

### BattleZone

By Quicksilva

This is almost identical to the arcade machine, and is a well coded and nice to play game.





# IN THE ARMY

In December 1980, Atari were approached by the US military with an interesting offer. Produce a modified version of Battlezone tailored to one of their assault vehicles, the Bradley Fighting Vehicle.

Atari took on the work, but one of the lead programmers of Battlezone, Ed Rotberg refused due to the connection with the US army. Eventually he was talked into it on the condition that he would never be asked again to do anything for the military.

Named The Bradley Trainer, only two of the units were ever produced and one is now thought lost, the other is in a private collection.

There are many differences to the arcade version.

1. The enemy objects were tanks, helicopters and machine gun posts. No UFOs appeared.
2. The control method was different, using a yolk similar to that later found on Star Wars arcade cabs.
3. There was no movement. The player could just rotate around.





# MIND YOUR LANGUAGE

George Beckett takes a stroll through the programming languages available on the Spectrum

While the ZX Spectrum is most often remembered for the vast catalogue of games that were (and still are) being produced, many Spectrum owners in the 80's turned their hand to programming; writing simple games, creating animations, or even developing more serious applications for school projects or small businesses.

Unlike today - when you can find an app to do almost anything - writing your own software was part and parcel of using a home computers in the early 1980's, and the programming environment was very visible from the moment the computer was powered on. Also unlike today, a microcomputer in the eighties didn't have to be useful. It was a novelty that started to appear in people's homes, intended to be cheap enough to be affordable by an average family who simply wanted to learn about computers and how to use them.

For the Spectrum, as for most microcomputers of the time, the built-in programming language was BASIC,

which also doubled-up as a simple operating system. Making a Spectrum do your beckoning by typing in a sequence of instructions was a satisfying pleasure that is difficult to realise with modern PCs, due to the underlying sophistication of PC software and the chasm between the means of the average user and the resources of a professional software house. In contrast, with a little patience and imagination, almost anyone could create a genuinely engaging and useful program on a computer like the Spectrum, which they could then save onto an audio cassette or Microdrive cartridge and share with their friends.

The Beginners All-purpose Symbolic Instruction Code, or BASIC for short, had been developed in the 1960's to allow university students to write software without the need to invest significant time to get to grips with lower-level languages that were the mainstay of mainframe computers. BASIC had a high-level syntax that was quick to learn and highly versatile, making it an obvious choice for machines such as the ZX Spectrum. The Spectrum version was a moderately cut-down implementation



of the full language, squeezed into a 16 kilobyte ROM. However, it was still rich enough to support complex mathematics, text manipulation, high-resolution graphics, sound, and real-time control.

However, the ease-of-use and flexibility of BASIC carried a high price. BASIC programs tended to consume a lot of memory, something that was precious to the Spectrum owner - especially for those who owned the 16k version. Also, as an interpreted, high-level language, it placed a large burden on the Z80 processor to understand and action the instructions, which meant it was slow. This was something that quickly became apparent as your programming ambitions and skills began to grow.

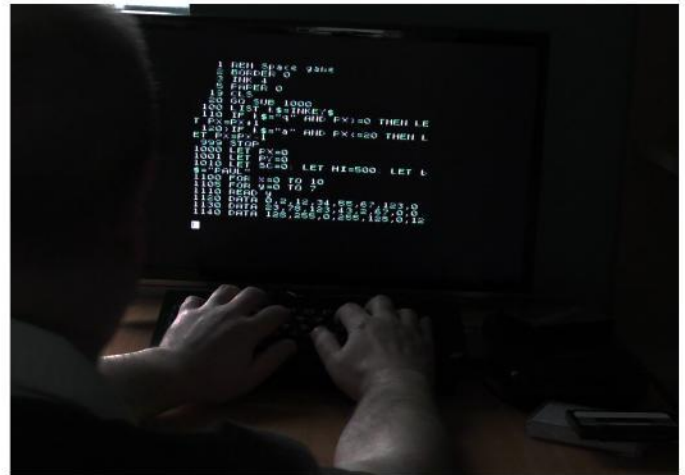
These limitations led some, at least, to look beyond BASIC - aiming to match the speed and scale of programs that began to appear in commercial software and games. Almost always this meant writing machine code (or assembly language) - effectively, creating programs using the low-level instructions that the Z80 processor understood. However, where BASIC was accessible and versatile, machine code was primitive, pedantic and time-consuming to write. A machine-code programmer was exposed to the raw innards of the computer, working directly with memory and interfacing to peripherals such as the keyboard and speaker via the I/O ports. It was all too easy to cause a catastrophic system crash by writing the wrong value to the wrong memory location and often frustratingly difficult to find exactly which wrong value written to which wrong location had caused the catastrophe.

However, Sinclair Research and other software publishers did a respectable job of giving Spectrum owners other ways to write software, that fitted somewhere between BASIC and machine code. From the very early days of the computer, a number of languages were available; exotic-sounding languages such as FORTH and Prolog, as well as mainstream languages such as Pascal and C.

This article series looks at some of the programming options that were/ are available to Spectrum users, and perhaps will inspire some of you to try/ return to programming yourself. We'll start by looking at BASIC, which was the starting point for almost everyone.

## BASIC

BASIC was originally developed in the 1960's, but enjoyed a renaissance in the 1980's when it became the programming language of choice for a whole range of microcomputers aimed at the home user.



BASIC made computing and computer programming accessible. It made a number of significant simplifications which obscured the more advanced concepts of software development that would have discouraged many enthusiasts. Instructions were written in a form that bore some resemblance to English with commands like PRINT to write a message to the screen (or printer) and BEEP to emit a sound, making it quick to learn a good selection of instructions.

BASIC was available out-of-the-box and as soon as you powered on your Spectrum. Further, the original Spectrum was provided with an excellent BASIC programming guide written by Steven Vickers, which led the user through the various aspects of Sinclair BASIC in a methodical and informative manner, with lots of examples and exercises of varying complexity. There was also a rich source of example programs in the many magazines and books that were produced for the Spectrum community, which inexperienced users could type in, modify, and use, learning tricks and techniques to get more from their Spectrum in the process.

As an interpreted language, programs were developed and executed in the same environment, so a user could switch between writing code and running the program seamlessly



## Mind Your Language

and effortlessly. This was very different to the norm, when the user would develop a program module in a text editor, then pass it to a compiler for translation into machine code, and then switch to a runtime environment to actually execute and test the program. In Spectrum BASIC, the user got immediate feedback on the correctness of the statements that they typed, and could experiment with constructs and ideas interactively.

In Fig.1 you can see a short program that demonstrates key elements of Spectrum BASIC. It computes the day of the week that corresponds to a date entered, using an algorithm called Zeller's Congruence. If you are familiar with BASIC, then you should find it relatively easy to follow what is going on, with the help of the modest comments included using REM statements. In lines 10 - 50, an array of seven strings is set up to hold the days of the week. These are read from DATA statements, which allow data to be stored alongside the program code. Then, in lines 100 - 130, the user is asked to enter the date for which they wish to know the corresponding day. This shows another common way to get data into a program, using INPUT statements. Zeller's algorithm is implemented in lines 150 - 170 and then, having printed the answer, the user is asked if they would like to enter another date (lines 180 - 230). Although the day of the week is worked out in lines 150 - 170, much of the actual mathematics is held in user-defined functions, which are defined towards the end of the program in lines 9000 - 9020.

While this program is functional and hopefully doesn't contain any significant bugs, (modern-day) professional programmers would be unhappy with a number of aspects of its design. A few of their key concerns might include:

- Variables are not well-named - for example, rather than using i\$ to hold a key press, they would prefer something more descriptive like lastKeystroke\$ or even just key\$;
- Numerical variables are always of floating-point type, even though Zeller's Congruence requires only integers - which can be stored in less memory and manipulated much more efficiently on the Z80 CPU (the processor at the heart of the ZX Spec-

Fig.1

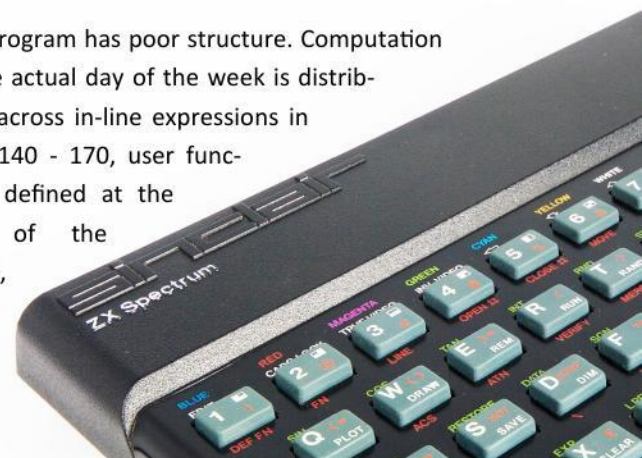
```

10 REM Zeller's Congruence
20 REM Set up array with days of week
30 RESTORE 9110
40 DIM d$(7,9)
50 FOR n=1 TO 7
60 READ d$(n)
70 NEXT n
100 REM Request date to be resolved
110 INPUT "Day (1-31) "; d
120 INPUT "Month (1-12) "; m
130 INPUT "Year (4-digit) "; y
140 REM ... and apply Zeller's Congruence
150 IF m<3 THEN LET m=m+12: LET y=y-1
160 LET j =INT (y/100)
170 LET k =FN m(y,100)
180 PRINT "Day is "; d$(FN d(d,m,k,j)+1)
190 REM Check if another date to be resolved
200 PRINT #1; "Want another day? (y/n) ";
210 LET i$=INKEY$
220 IF i$="" THEN GO TO 190
230 PRINT #1; i$
240 PAUSE 30
250 IF i$="y" OR i$="Y" THEN CLS : GO TO 110
290 STOP
9000 REM Remainder for integer division
9010 DEF FN m(n,d)=n-d*(INT (n/d))
9020 REM Kernel of Zeller's Congruence
9030 DEF FN d(q,m,k,j)=FN m((q+INT (13*(m+1)/5)+k+INT
(k/4)+INT (j/4)+5*j),7)
9100 REM Days of the week
9110 DATA
"Saturday","Sunday","Monday","Tuesday","Wednesday","Th
ursday","Friday"

```

trum).

- The program has poor structure. Computation of the actual day of the week is distributed across in-line expressions in lines 140 - 170, user functions defined at the end of the listing,





and an array of days that is created at the beginning of the program.

- The program uses the often-dreaded GOTO statement that - in longer programs—can lead to "spaghetti code", which is difficult to trace the flow of.
- Variables are not well-scoped. Almost all of the variables persist for the life of the program - often referred to as having 'global' scope. Also, the definition and use of variables is not well-contained. For example, the array d\$() (which should probably be named daysOfTheWeek\$()) is defined at the beginning of the program though then accessed mid-way through the program at line 170.

I suspect there are many other criticisms that could be levelled at the program, though hopefully you get the idea. These criticisms are valid and, for a longer program, would likely make on-going support and development more challenging. However, they are also limitations of the BASIC language—or, at least, the ZX Spectrum implementation of the language. In Spectrum BASIC: string variables and arrays may only have single-letter names; only string and floating-point variable types are available; there is no concept of a procedure (though I could have used a sub-routine); flow-control is limited to FOR loops, GOSUB and RETURN, and GOTO, making even modest workflows difficult to write; and the only non-global variables that are supported are within the definition of user functions (DEF FN).

These kind of observations have led some to criticise the choice of BASIC as a beginner's language, on the Spectrum and more generally, because it encourages bad [programming] habits.

However, I think this misses the point. The Spectrum's programming language has to fit into a 16-kilobyte

ROM, to be easy-to-use, and to support the graphics, sounds, and mathematical capabilities of the computer.

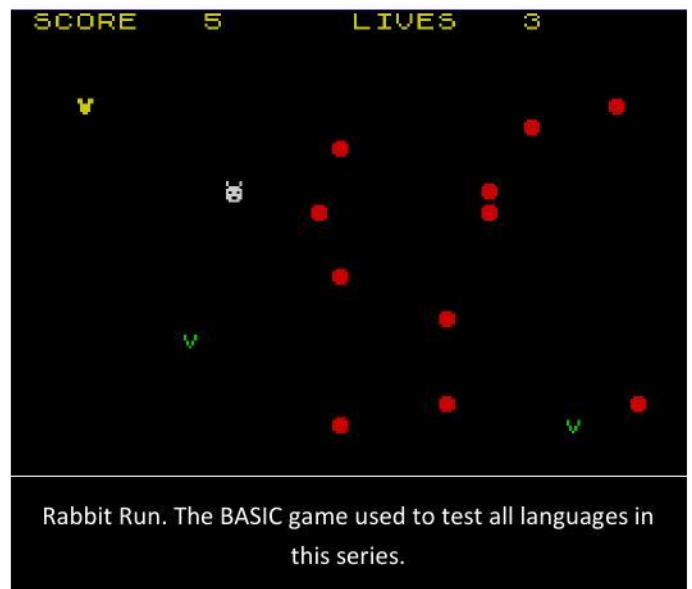
Further, to my mind, BASIC was designed for programs of a length and complexity similar to the program above. Many (including myself) have tried to write much longer and more

sophisticated programs, even though the end results often have poor performance and are difficult to maintain. However, I think that far from being a negative, this is actually a testament to the success of BASIC on the microcomputer and to the vision of those who conceived it.

A very popular ambition for a budding BASIC programmer in the 1980's was to write a successful arcade-style game. Spectrum BASIC provided various elements to help with this, including high-resolution drawing commands, user-defined graphics, sound, and functions for querying the contents of the screen. However, significant care was needed to produce a good playing experience: the overhead of the BASIC interpreter could easily lead to sluggish or unpredictable responsiveness, which would significantly deduct from the playing experience.

An example of the kinds of care needed when writing a game is provided in the listing Fig.2, for a simple game called Rabbit Run (based on a game written by Paul Jenkinson). In the game, you take on the role of a rabbit, who hops around the screen eating fresh green leaves as they appear, while avoiding falling down the many holes created by an infestation of pesky moles.

To run the game, you enter "RUN 1000", having made sure that Caps Lock is turned off (since the game only checks for un-shifted key presses). You can also download this from The Spectrum Show website.



Download this game:  
[www.thespectrumshow.co.uk/basic](http://www.thespectrumshow.co.uk/basic)

# Mind Your Language

Fig.2

```

10 REM Rabbit Run
100 REM Main game loop
110 LET i=CODE (INKEY$)
120 IF NOT i THEN GO TO 400
130 PRINT AT x,y; " ": BEEP 0.002,1:
140 LET y=y+(i=112) * (y<30)-(i=111) * (y>1)
150 LET x=x+(i=97) * (x<20)-(i=113) * (x>1)
160 PRINT AT x,y;"<Graphic-A>"
200 REM Check for mole hill
210 IF ATTR (x,y)<>2 THEN GO TO 300
220 PRINT AT x,y; INK 2; FLASH 1; "<Graphic-B>"
230 FOR n=-20 TO -30 STEP -1
240 BEEP 0.05,n
250 NEXT n
260 PRINT AT x,y; INK 7;" <Graphic-A>"
270 LET l=l-1
280 PRINT AT 0,22;FN s$(l)
290 IF l=0 THEN STOP
300 REM Check for food
310 IF ATTR (x,y)<>4 THEN GO TO 400
320 BEEP 0.003,20
330 PRINT AT x,y; INK 7;"<Graphic-A>"
340 LET s=s+1
350 PRINT AT 0,7;FN s$(s)
400 REM Check for new mole hill
410 IF (t/10<>INT (t/10)) THEN GO TO 500
420 BEEP 0.02,1
430 PRINT AT RND*17+2,RND*27+2; INK 2; "<Graphic-B>"
500 REM Check for new food
510 IF t/17<>INT (t/17) THEN GO TO 600
520 BEEP 0.02,10
530 PRINT AT RND*17+2,RND*27+2; INK 4; "v"
600 REM Increment timer
610 LET t=t+1
620 IF t>99 THEN LET t=0
990 GO TO 100
1000 REM Program startup
1010 GO SUB 9100
1020 GO SUB 9000
1030 GO TO 100
8000 REM Right-justify score and lives
8010 DEF FN s$(s)=1$( TO 3-LEN (STR$ (s)))+STR$ (s)
9000 REM Set up screen
9010 LET x=10: LET y=16
9020 PAPER 0: INK 7: BORDER 1: CLS
9025 PRINT AT 0,0; INK 6; "
"
9030 PAPER 8: INK 8
9040 PRINT AT x,y;"<Graphic-A>"

```

```

9050 LET l=3: LET s=0
9060 LET t=0: LET l$=" "
9070 PRINT AT 0,1;"SCORE","LIVES"
9080 PRINT AT 0,7;FN s$(s);AT 0,22;FN s$(l)
9090 RETURN
9100 REM Define rabbit and hole
9110 RESTORE 9200
9120 LET p=USR "a"
9130 FOR r=0 TO 15
9140 READ d
9150 POKE p+r, d
9160 NEXT r
9190 RETURN
9200 DATA 66, 66, 60, 126, 90, 126, 102, 60
9210 DATA 0, 60, 126, 126, 126, 126, 60, 0

```

Rabbit Run features high-resolution colour graphics, sound, and (hopefully) responsive game play. To achieve this, various compromises have had to be made:

- The game screen is a grid of character cells and, to ensure changes are printed (reasonably) quickly, all graphics are single-character UDGs and movement is limited to whole-cell jumps.
- Collision detection is based on attributes: each game element needs to be a different colour, so that it can be efficiently identified using the ATTR function.
- Sounds are kept to short-duration beeps, to make game-play smooth: the action stops whenever the Spectrum needs to emit a sound, so long sounds would lead to the game having a noticeable jerkiness.
- The main game loop, which is the key time-critical element, appears at the beginning of the program, to reduce the time taken by branch statements like GO TO. In Spectrum BASIC, when a branch is encountered, the destination is located by searching from the beginning of the program. Thus destinations towards



the end of the program take (sometimes much) longer to find than those near the beginning.

For the same reason, the length of the program is kept short, with few REM statements and only single-character variable names.

- The movement operations are encoded in two logic expressions, in lines 140 and 150, rather than the more usual IF...THEN clause. This reduces the cost of decoding key presses, since the result of the key test (a 'one' or a 'zero') can immediately be used to increment/ decrement the coordinates of the rabbit's location.

There are many options to develop the above game: new elements for extra lives or to suspend the moles from dig-

ging, joystick support, help text, a rabbit UDG that doesn't look like something out of Donnie Darko, and so on. However, hopefully the game as is illustrates the key concepts and forms a good benchmark with which to investigate alternative programming approaches.

At this point, the most time-consuming element of the program is deleting and re-printing the Rabbit graphic, as it moves around the screen. In Spectrum BASIC, there is little further that can be done to speed up the program. The PRINT command is a very versatile one, which can: print to different devices, such as the screen or a printer; apply colour attributes and other control characters; and can expand BASIC command tokens. However, this versatility makes PRINT relatively slow, which is problematic for real-time games. One would need to find an alternative, more efficient implementation of the PRINT statement - either replacing with a machine-code routine or an optimised printing routine from a BASIC extension.

## Coming Up Next Issue

George looks at different versions of BASIC including Beta Basic, Mallard Basic and Laser Basic.



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## DALEY THOMPSON'S OLYMPIC CHALLENGE

Ocean Software 1988

Daley Thompson's Olympic Challenge was released in 1988, by Ocean Software to tie in with the Seoul games of the same year. Sadly Daley's time was coming to an end by this point and he could only managed 4th place. Still, he could come home and play this game to cheer himself up.

The large box contains a warning for humble 48k users, the Ocean catalogue for 1988, a giant poster, an instruction sheet and finally two cassettes. One of them has a free audio track which you can play in the background if you actually like it.

This game differs from the original game in that our Olympic hero has to do some training first before he can hit the track. This takes the form of 3 stages. Weights, to complete this you just sit and hammer the keys (like you do in all training events and pretty much the entire game). A well-drawn Daley lifts weights, does sit-ups and finally goes through some squats. But what does all this mean? As you train a bottle of Lucozade slowly fills up, the first of two product placements here. The more the bottle fills up, the better your stamina will be during the real events, if your keyboard survives.



So after a few key destroying minutes you finally get to the meat of the game. First up though you have to choose the correct footwear, and here we get the second product placement Adidas. Pick the right one and your performance will improve, pick the wrong one, and the correct one is highlighted for you to remember. There is no need for this other than to get product placement and it just gets in the way.





On to the first event then, the 100 meters. You should know by now that there is little skill in these types of games, it's just a matter of hitting the keys or wagging the joystick as fast as you can. As you bash away, Daley sprints down the track and you have to beat a qualify time set at the bottom of the screen.

I must be getting old, because I found it very difficult to beat this, but I did choose the wrong footwear! Further attempts with the right footwear didn't fair any better. No wonder thousands of joysticks died playing games like this!

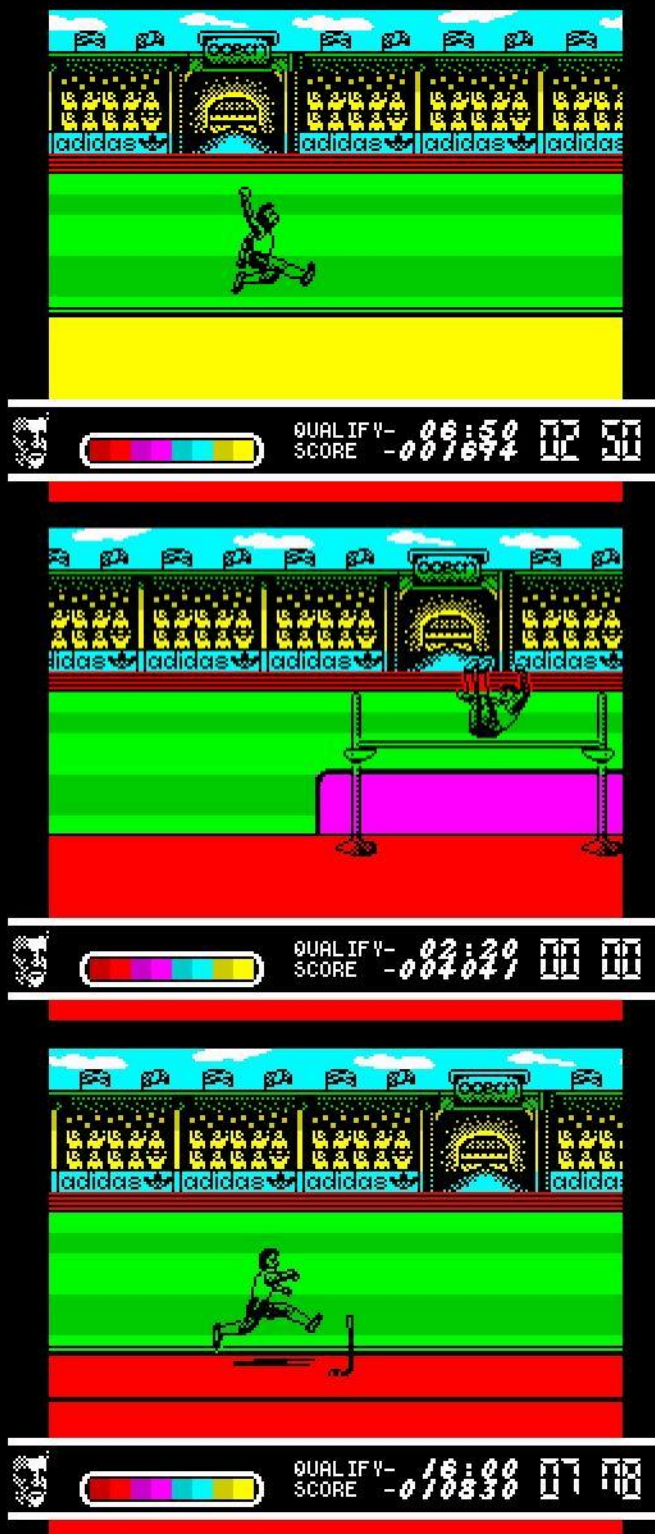
The next event is the long jump. Run down the track and hit the M key (or fire button) at the right time to get Daley to jump as far as he can. I completely failed this bit too!

Next comes the shot put. Again hammer the keys for a small amount of time and wait for the throw. Fail these events like I did and it's game over. Complete them and it's onto the other stages. The high jump, more key mashing and the press of a button to jump. The 400 metres, more button pressing. The 110 Metre hurdles, more running and jumping. The discus, buttons and throw. Pole Vault... run, plant... jump... this section changes the angle, which is somewhat confusing too. Javelin, run get the angle and throw and finally the 1500 meters... more running...

I was never a big fan of these types of games. To me there was no real skill involved.

The graphics are great as you can see. Well drawn and well animated, although the crowd seem to be as bored as I was. No movement at all. No waving arms or flags, in fact they are probably all just dummies, placed there while the real crowd sneak off to the pub!

Sound is very limited and apart from the tune between stages there are just the odd beeps. The sound of running is weak and to be honest if you are playing this game you'll be too busy smashing the keys to worry about sound.



If you enjoy hitting two keys, one after the other for 30 minutes, give this a try... otherwise... save your keyboard and go find something else...



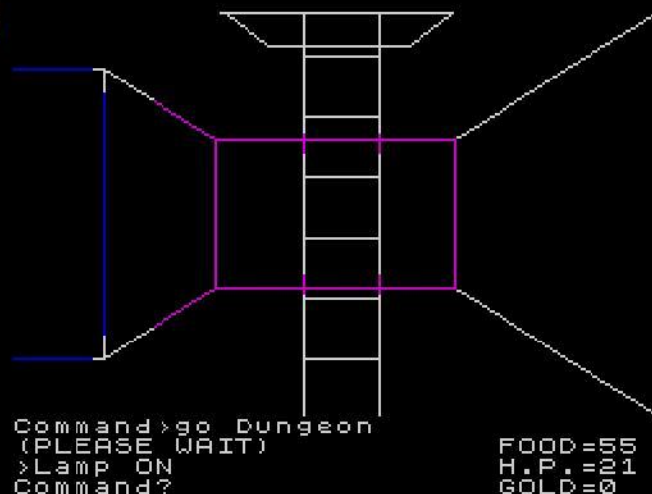
## AKALABETH WORLD OF DOOM

I first encountered "Akalabeth: World of Doom" late last year, in a discussion on the World of Spectrum forum about porting the game to the ZX Spectrum. The game is a turn-based, 3D graphical adventure, with a Dungeons & Dragons fantasy style, written in 1978 by a then high-school student called Richard Garriott. The story goes that Richard wanted to recreate the feel of the role-playing games that were popular at the time, in a computer form. His tool of choice for Akalabeth was BASIC on an Apple II computer.

The port to the Spectrum is now complete, thanks to the hard work of a WoS forum contributor called Battle Bunny. You can find a download link on the WoS forum discussion noted above. In my opinion, it is well worth playing, as it represents something a little different from the norm and illustrates what is possible with a humble BASIC program, a little imagination, and lots of patience.

Several aspects of Akalabeth have really got me hooked on both playing the game and learning more about its origins and development. I think it encapsulates the spirit of the early days of home computing, when many people sat at their keyboard and tried to write a great computer game. I like to believe that Richard was inspired to write this game because it was something he wanted to play and share with his friends (though, in time, Akalabeth did become a successful commercial titles). The game was pioneering for its time, being one of the first turn-based graphical adventure. It possesses a quirkiness (for example, the old-world language) and a slightly chaotic feel (especially in the source code); things that would almost certainly have been ironed out if a commercial software house were involved.

The game is written entirely in BASIC - a language not normally associated with great games. Despite this, the game is feature-rich and fun to play, with significant depths that will take some time to explore. Further, being written in BASIC, anyone with a modest programming knowledge can hit Break, list the code, and explore how the program works.



While the use of BASIC is evident at various points in the speed at which graphics are rendered (especially when navigating the dungeons), I think it is important that the port has been kept in BASIC, as this was the tool available to a budding games programmer at the time.

The instructions for Akalabeth are deliberately brief, starting with a short history of the fantasy land of Akalabeth and hinting at your mission, "'tis thy duty to rid Akalabeth of the foul creatures which infest it, while trying to stay alive!!!!". You are told that you need to find Lord British's castle to start your quest and you are advised to stock up on food before you begin. Otherwise, you are on your own and learn about the game as you play.

Most of the action takes place in one of two modes. In the overland, you navigate the ravaged land of Akalabeth, represented as a top-down view of a 20x20 grid of locations, using direction keys to move north, east, south and west, until you arrive at a location you wish to explore further; such as a town, Lord British's castle, or a dungeon. It doesn't take long to realise that at some point you need to venture into the dungeons, where evil creatures lie in wait and many a trap and trick are set to catch the unwary. The dungeons are presented as a first-person 3D maze extending over multiple levels: be warned that it is very easy to get lost!

You play the game as either a fighter or a mage. As a fighter, you have more weapons to choose from, while as a mage you can cast various spells (once you find, or earn

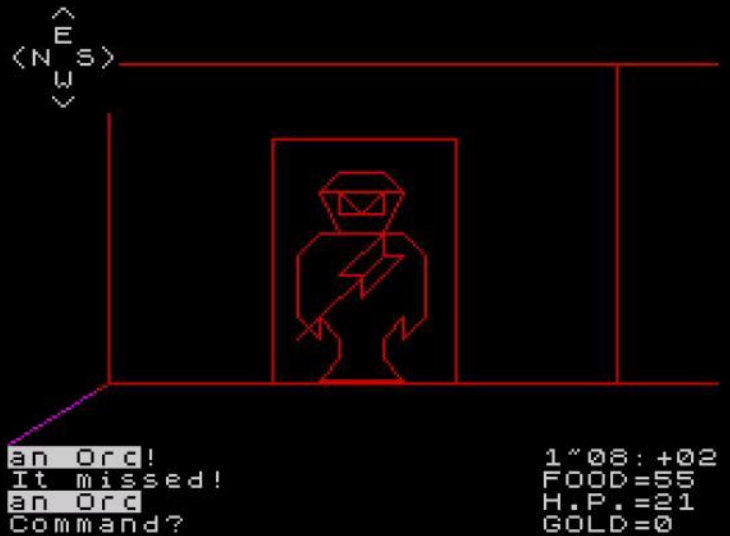


enough money to buy, a magic amulet). In the style of Dungeons and Dragons, your character has a number of attributes - such as strength, hit points, and wisdom - which determine how well they can fight, their capacity to survive injury, and the complexity of the tasks they have to complete. These attributes are generated randomly at the start of each game, though - as in Dungeons and Dragons - you can 're-rolling the dice' until you get of attributes you are happy with.

You also choose a lucky number, at the start of the game, which is used as a seed for random-number generation. This is a useful feature that means (by choosing the same lucky number) you can play the same quest (map layout and tasks).

The Spectrum port compares well to the Apple II original. The look and feel of the game is very similar, though the Spectrum's BASIC interpreter is quite a bit slower than the Apple II's (despite the Spectrum being launched four years later than the Apple). Battle Bunny has rewritten some of the graphics routines in machine code to overcome this poor performance. While this moves away from the all-BASIC philosophy of the original, I think it is a worthwhile compromise to make the game more playable.

Battle Bunny has also added several new features that are sympathetic extensions to the original game, and that make play a little fairer and more interesting, without detracting from the magic of Richard Garriott's original idea. Most obviously, the game now includes colour, in both the overland and in dungeons. There is a map which is



updated as you explore either the overland or a dungeon (provided you have enough map paper) and a compass to keep you orientated in the dungeons. Battle Bunny has added new items that you can buy (or may find as you explore): it is wise to stock up on lamp oil before exploring the dungeon as without it you cannot use the compass and your map is not updated; you also need arrows for the bow, and these deplete as you use them in the obvious way.

Battle Bunny also added a Save Game option, which was missing from the original - though looks suspiciously like it should have been included.

Playing Akalabeth is great fun in its own right, and I suspect many Spectrum fans will happily wile away a few hours doing this. However, it is also interesting to study the game's source code, to see how it all works. If you're interested to do this, I'd recommend starting from the Apple II source, as the Spectrum version has some obfuscated code, to help fit it into 48 kilobytes of memory and improve the performance.

Of course, delving into the source code will reveal the secrets of the game, so you should play it for a while first, so as not to miss that feeling of entering the unknown. Then, having studied the source code, you might be inspired to make further improvements, write your own version, or get your friends to play. This is all part of the spirit of home computing as it was in the late 70's and early 80's.

Review by George Beckett



# VEGA GAME REVIEWS



Reviewing the games  
that came with the  
Vega console

*..but without instructions!*

## GALACTIC GUNNERS

This game I briefly played when doing my Scramble shoot-out, and it lends itself very well to the Vega. The simple up, down, left, right and fire mechanics are easy to use and the game pad makes control easy.

The landscape scrolls smoothly, the graphics are well defined and well animated and the sound is excellent, with some great effects and tunes (mostly borrowed from Dynamite Dan!).

As with most games of this type, the aim is to get as far as you can while scoring as much as you can. Your ship can fire and drop bombs (by holding the fire button down) and can collect bonuses when certain enemies are killed.

The levels consist of typical Scramble style scenery so there is some flying skills needed not to crash while dodging aliens.

At the end of each level there is a boss to kill, usually taking a lot of shots to dispense, and then it's on to the next, harder level.

Each level has it's own style of graphics and the game is great to play. It's a no frills, sit back and blast game that is easy to pick up but difficult to put down.

Definitely one to check out on your Vega.





# HERCULES

My first impressions of this game were good, the graphics are large and look really nice. They are well animated and move smoothly, but then it all goes wrong.

Having no idea what to do, I presumed you have to fight the skeleton that soon appears. So off I went, hitting it with my club and kicking it in the shins. Then as my button mashing continued, Hercules turned around facing away from the bony enemy.

The skeleton then proceeded to give the hero a good bashing. After more frantic button mashing, I finally got him the right way around (by pressing fire and up at the same time!)

After a bit of ducking and diving, I found the best policy was to just stand still with the fire and left button held down. Slowly, very slowly, the skeleton's energy (seen on the right of the screen) reached zero and it collapsed. Hurrah!

Nothing happened. I couldn't walk off the screen as expected. Another skeleton arrived and the whole fight started again. Each fight takes about 2 minutes and is dull. No special moves, no different weapons, just trading blows like some cheap cartoon.

Eventually Hercules died (probably of boredom) and I was informed I had collected 0 to 12 tasks. What tasks? Nothing in the game told me about collecting anything, or how to collect it.

The sound soon got annoying, and although the music playing during the game is good, after you have heard it the hundredth time, it soon grates on your ears.

The control was sluggish too, making for a terrible experience.

Despite the nice graphics then, this is a poor game with no skill required that you soon tire of.

Stay away.





# GRUMPY OGRE'S

## Adventure Page

Welcome one and all to Grumpy Ogre's Adventure Page, a place where magic (and plenty of other strange things) happen.

I remember rumours back when Activision bought out Infocom that Spectrum owners could possibly see some of the all time classic games appearing on the +3 machine.

Sadly this never came to fruition, and I have tried many times to track down the tools that might just make it happen, based around Z-machine interpreters.

Z-Machine is what Infocom wrote most of their games in (or at least outputted for different target machines), that way all they needed to do to port to a new machine was create something that could understand that code.

In this wonderful modern world, Z-Machine interpreters have been with us for decades now, and you can get them for virtually all modern machines. This includes PCs, Macs, Amigas, IOS, Android and many more.

There is one for the Spectrum too, called ZXZVM, but I have had many attempts to get this working, failing each time. But with a few days holiday, the crap weather and still an interest in experimentation, I set about things again.

There are many stages to go through, many hoops to jump

### ZXZVM for +3 Installer

You can make changes to set your preferred colours, typeset and printer before installing.

To do this, press ENTER and alter lines 10-90 as desired, then continue install by typing RUN 9000.

Colours can also be changed in play, by pressing the up and down arrow keys.

Enter drive for install (eg A:)

through and many tools you will need if you want to follow in my footsteps. At the end of it though, you can play real Infocom games on your Spectrum plus 3.

I will be doing a feature for the show about it, so you can follow the instructions and see for yourself.

However, the game I wanted to play, Zork, failed to run. It started well, but any command entered just caused the whole thing to crash!

The next game I tried was Hitchhiker's Guide To The Galaxy, based on the brilliant radio series, books and TV show of the same name. (let's not mention the film).

This worked perfectly and before I knew it I was immersed in the wonderful descriptive world on an Infocom

game.

The package states it is a standard level game, but it is really challenging. I remember playing it on my Amiga (I still have that game in the loft) and having real difficulty in progressing.

You seemingly can't do anything when you first start the game. When you have tried everything, in frustration you enter TURN LIGHT ON and suddenly the game then begins to make a little sense.

```
West of House 0/0
ZORK I: The Great Underground Empire
Copyright (c) 1981, 1982, 1983 Infocom, Inc. All rights
reserved.
ZORK is a registered trademark of Infocom, Inc.
Revision 88 / Serial number 840726

West of House
You are standing in an open field west of a white house, with a
boarded front door.
There is a small mailbox here.

>

I beg your pardon?

>i
You are empty-handed.
Division by zero at PC=01022E
Z-machine stack trace:
Caller PC=00551C Call type=02 Routine sp=2120 params 22
4148222ADFC501200FCD2E09C108FE1737C887C9CDE045759CD2F05D03E
Caller PC=230003 Call type=00 Routine sp=B7F4 params 00
727ACD40180C7905D00D5E05D0560613007E02CDE304CDC019CB23CB0000
```



The masses of text in this game is important, as many clues are held within.

I played the game for a while, but the lure of getting the other games onto my Spectrum was too great and I set about the task.

Some of the games are freely available to download from the Infocom site, including Zork 1, 2 and 3. If you want the others, do a little searching, they are all out there.

And now on to a moan. A day is not complete until I have had a whinge about something. And today, with all that previous stuff, I am taking aim at random outcomes in adventure games.

Even the great Zork is guilty of this, as I found out when playing it as part of my efforts to get it onto the Spectrum.

Once you find the troll, you have to attack it (usually best with the sword). You do not always succeed and end up dead. Sometimes you do succeed and can then continue with the game.

This type of puzzle is so infuriating for players. There is no need for it. At least make the fight based on, say, a type of weapon or your strength, but not random. Of course you can save your game before this, but that means saving after each move just in case!! Madness.

A quick view of the walkthrough to Zork surprised me. The sheer size of the game is impressive, which is probably why it wasn't available for cassette based machines.

It is not the amount of locations either, the quality and amount of text squeezed into the game is also impressive.

There are also different solutions to the same puzzle occasionally, first noticed with the cyclops.

You have the choice to scare it by saying a word, or you can bribe it by providing food and water from the kitchen. I like this kind of approach as it gives you more chances to progress, although it can lead to objects that are not required that just take up memory.

Good game design is the key then, as with most games. Just stop the randomness!

>attack troll with sword

You are still recovering from that last blow, so your attack is ineffective. The axe crashes against the rock, throwing sparks!

>attack troll with sword

A good slash, but it misses the troll by a mile.

The flat of the troll's axe hits you delicately on the head, knocking you out.

Conquering his fears, the troll puts you to death.

It appears that that last blow was too much for you. I'm afraid you are dead.

\*\*\*\* You have died \*\*\*\*





## CASSETTE 50

### GAME BY GAME

Our continued look at the games from this iconic (for all the wrong reasons) collection.

#### 11. Lunar Lander

A terrible game following the usual left, right, thrust controls, but it is impossible to actually land, even pressing the thrust key the whole time. There is a long range view at the start, but it serves little purpose.

#### 12. Maze Eater

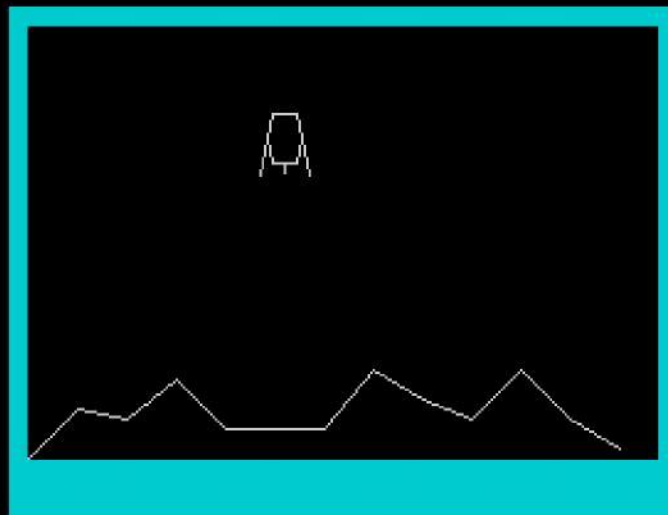
Argh! The worst Pacman game I have seen in a long time. You control a green block moving around a maze eating asterisks. A red block chases you eventually, but the whole thing is sooooo slow!

#### 13. Short Circuit (Microtrap)

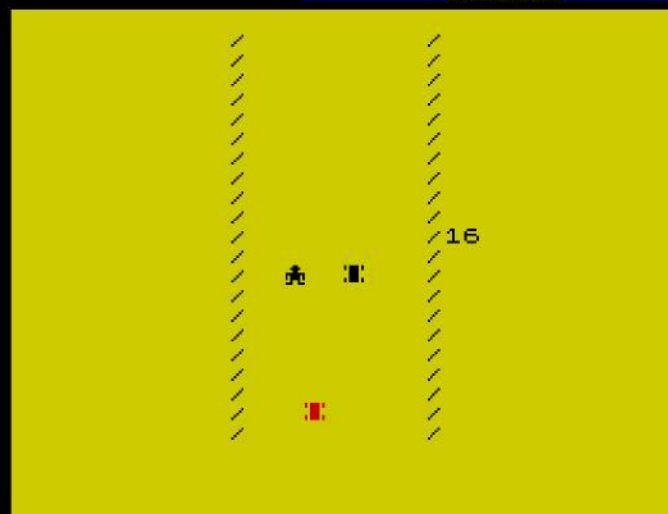
You move towards the mains plug to stop the computer trying to surround you with bits of circuit board. Each move triggers the computer to place a bit of circuit. Very dull.

#### 14. Motorway

Really? You control a red car at the bottom of the screen on a narrow road. A black car and a human then move down the screen. Using left and right controls you have to knock down the person and avoid the car. You get points for running down a human! This is a tedious game with no in-game sound.



SCORE  
50





## 15. Labyrinth

Not based on the film (as you probably would have guessed) but a crap maze game. You control a magenta O and have to get to the centre of the maze. Each time you move, the guards (\*) move. If you stay still, so do they! They have set patterns and you have limited water. Once you know the route, it is easy (and dull)

## 16. Skittles

30 skittles, 6 balls. Choose a lane, press fire. The ball moves across the screen and when it hits a skittle, it then randomly moves up or down. This makes the game completely random and totally useless. There is no skill here, it's all down to luck. No sound either!

## 17. Race Track

Your little blue car sits at the top of the screen as the odd coloured road scrolls up. You simply move left or right to navigate. Boring as hell, and silent.

## 18. Spectral Skiing

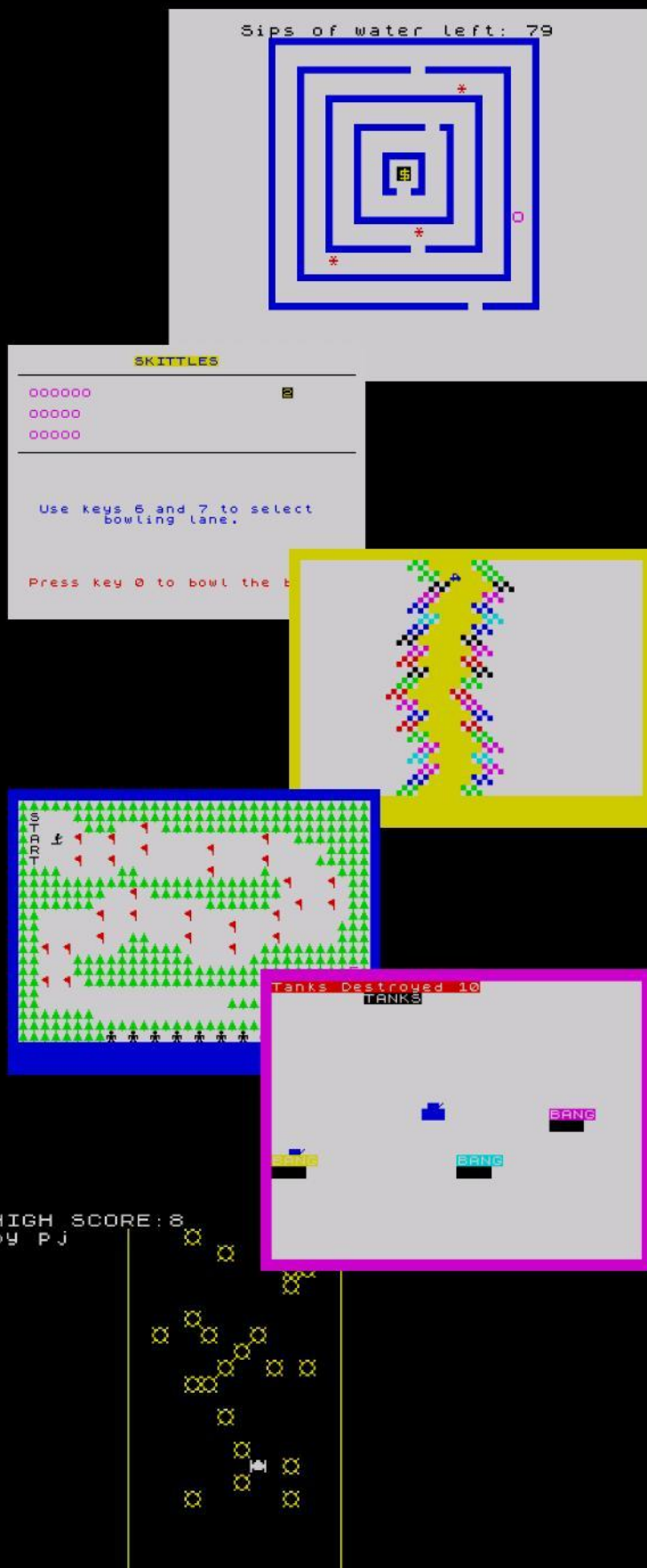
What an unbearable game this is. You have to control your skier and try to reach the finish at the bottom of the screen. However, and this is the killer, your skier will move continually once he starts. This means he will hit something in the first few moves. At least it has sound, but it is still unplayable.

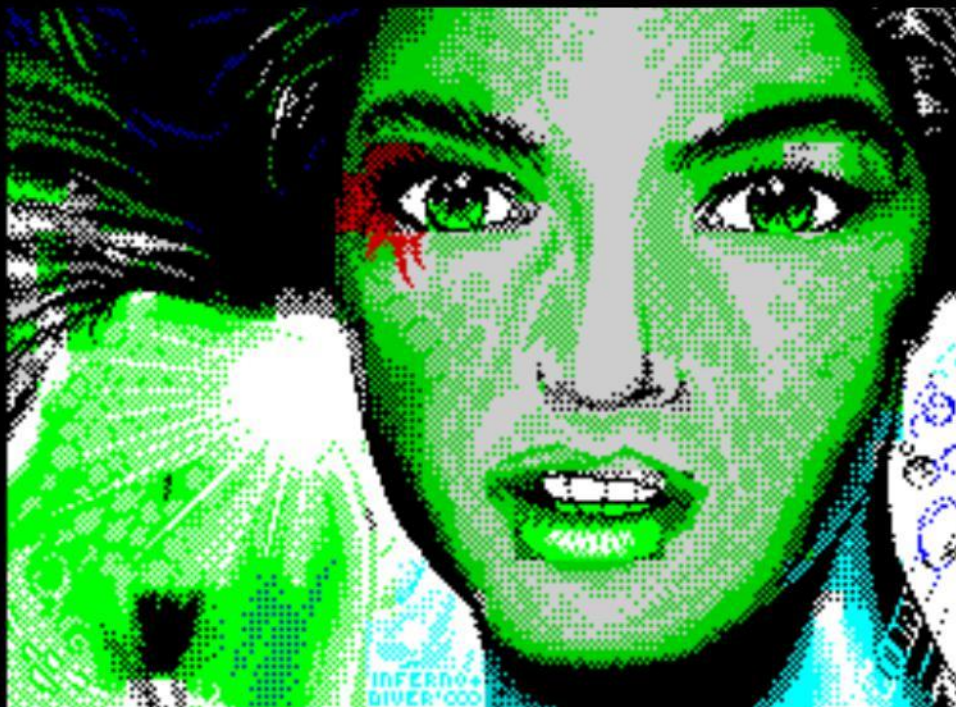
## 19. Tanks

What!! Move your tank across the screen and avoid invisible mines. Yes, invisible.. So you can't see them. That means you die every time!!

## 20. Solar Ship

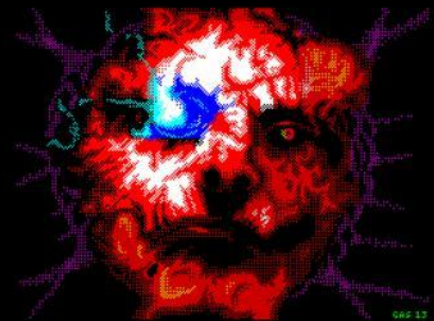
Steer your spaceship into suns as you move slowly up the screen. Makes no sense. No skill either as the suns are random and that means a limited score anyway.





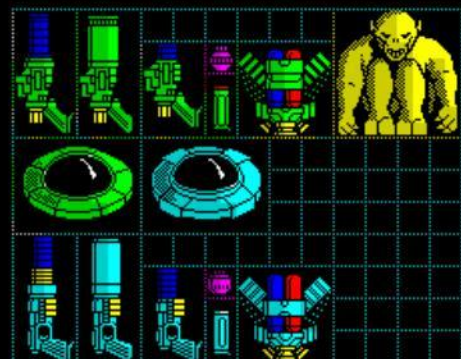
RANDOM IMAGES FROM <http://zxart.ee>





## Not just screen\$

ZXART is the place to go to show off your skills not only creating screen\$ but also sprites, mock-ups or anything pixel based. Create and share.





# CODE

# ZERO

BY PAUL JENKINSON



A NEW GAME FROM THE AUTHOR  
OF ANTIQUITY JONES AND KYD  
CADET.



AVAILABLE NOW